

**§ 90.210 Emission masks.**

Frequency band (MHz)	Mask for equipment with audio low pass filter	Mask for equipment without audio low pass filter
<p>*****</p> <p>4940-4990 MHz</p> <p>*****</p>	<p>*****</p> <p>L.....</p> <p>*****</p>	<p>*****</p> <p>L</p> <p>*****</p>

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(l) *Emission Mask L.* For transmitters operating in the 4940-4990 MHz frequency band

A). *Low Power 10 and 20 MHz Devices.* For devices operating at channel bandwidths of 10 or 20 MHz, and at transmitter power levels of 20 dBm or less (or at an EIRP of 29 dBm or less), the power spectral density of the emissions must be reduced as follows:

- (1) On any frequency removed from the assigned frequency by more than 50 percent but less than 55 percent of the channel bandwidth: At least 10 dB.
- (2) On any frequency removed from the assigned frequency by more than 55 percent but less than 100 percent of the channel bandwidth: At least 20 dB.
- (3) On any frequency removed from the assigned frequency by more than 100 percent but less than 150 percent of the channel bandwidth: At least 28 dB.
- (4) On any frequency removed from the assigned frequency by more than 150 percent of the channel: At least 40 dB.
- (5) The measurements shall be made using a 100 kHz resolution bandwidth and a 30 kHz video bandwidth.

B). *High Power 10 and 20 MHz Devices.* For devices operating at channel bandwidths of 10 or 20 MHz, and at transmitter power levels greater than 20 dBm (or at an EIRP of greater than 29 dBm), until further studies have concluded, the power spectral density of the emissions must be reduced as indicated in C (below) for primary service operations. However, equipment emissions meeting the attenuation in A) (above) may operate under a secondary temporary experimental authorization of 180 days duration.

C). *Devices Operating on Channel Widths 5 MHz or Less.* For devices operating at channel bandwidths of 5 MHz or less (and for the cases specified in B), any emission must be attenuated below the output power of the transmitter as follows:

- (1) On any frequency removed from the assigned frequency by more than 40 percent but less than 75 percent of the authorized bandwidth: At least 28 dB.
- (2) On any frequency removed from the assigned frequency by more than 75 percent but less than 125 percent of the authorized bandwidth: At least 37 dB.
- (3) On any frequency removed from the assigned frequency by more than 125 percent but less

than 150 percent of the authorized bandwidth: At least 41 dB.

(4) On any frequency removed from the assigned frequency by more than 150 percent of the authorized bandwidth: At least 53 dB.

(5) For C), the zero dB reference is measured relative to the highest average power of the fundamental emission measured across the designated channel bandwidth using a resolution bandwidth of at least one percent of the occupied bandwidth of the fundamental emission. Emission levels are also based on the use of measurement instrumentation employing a resolution bandwidth of at least one percent of the occupied bandwidth.

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